Section I (Amendments to the Claims)

Please amend claim 13, and add new claims 29-38 as set out in the following listing of the claims of the application.

1. **(Previously presented)** A vaporizer comprising:

a thermally conductive block comprising a top surface and bottom surface and a multiplicity of non-moving elongated wells formed therein for placement of a vapor source material, the multiplicity of elongated wells communicatively connected to an interior space above said wells within the thermally conductive block for accumulation of vapor, wherein each elongated well consists of a closed end and single opening that is in fluid communication with the interior space, and wherein each elongated well is vertically positioned relative to the top and bottom surface of the conductive block, the thermally conductive block having an interior volume that comprises (i) said interior space and (ii) an internal volume of said multiplicity of elongated wells, wherein the internal volume of said multiplicity of said wells is from about 1/3 to about 1/2 of the interior volume;

a heating device for applying heat to the multiplicity of the elongated wells within the thermally conductive block;

a removable sealing lid positioned on and dimensionally coextensive with the top of the thermally conductive block, being in leak-tight contact along its entire peripheral extent with edges of the thermally conductive block for leak-tightly sealing the thermally conductive block to form a closed vessel, and removable for ease of filling the elongated wells, said lid having a single central outlet port therein as the only opening therein for flow out of the closed vessel of vapor deriving from said vapor source material; and

a single vertical central valved outlet passage communicatively connected to the single central outlet port of the removable sealing lid and in vapor flow communication with the interior space, constituting the only outlet passage for discharge of vapor formed in the vaporizer;

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wherein said thermally conductive block is not coupled to a surrounding enclosing container.

2. **(Previously presented)** The vaporizer of claim 1 further comprising a control mechanism for controlling temperature generated by the heating device.

3. **(Original)** The vaporizer of claim 1 containing liquid source material.

4. **(Original)** The vaporizer of claim 1 containing solid source material.

5. **(Previously presented)** A vaporizer comprising:

a thermally conductive block comprising a top surface and bottom surface and a multiplicity of non-moving elongated wells formed therein for placement of a vapor source material, the multiplicity of elongated wells communicatively connected to an interior space within the thermally conductive block for accumulation of vapor, wherein each elongated well consists of a closed end and single opening that is in fluid communication with the interior space, and wherein each elongated well is vertically positioned relative to the top and bottom surface of the conductive block;

a heating device for applying heat to the multiplicity of the elongated wells within the thermally conductive block;

a removable sealing lid positioned on the top of the thermally conductive block for sealing the thermally conductive block to form a closed vessel and removable for ease of filling the elongated wells; and

an openable and closable outlet for discharge of vapor formed in the vaporizer communicatively connected to the removable sealing lid and the interior space, wherein the vaporizer contains decaborane.

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6. **(Previously presented)** The vaporizer of claim 5 wherein at least four elongated wells are formed in the thermally conductive block, and each of said wells has a diameter in a range of from about 3 to 8 millimeters.

7. **(Previously presented)** The vaporizer of claim 5 wherein the heating device for applying heat to the thermally conductive block comprise at least one resistive heating element.

8. **(Original)** The vaporizer of claim 1 wherein each wall of the thermally conductive block has at least one resistive heating element attached thereto.

9. **(Previously presented)** The vaporizer of claim 2 wherein the control mechanism for controlling temperature comprise a thermocouple.

10. **(Previously presented)** The vaporizer of claim 2 wherein the control mechanism for controlling temperature is arranged to maintain the block at a sufficient temperature to vaporize the source material.

11. **(Previously presented)** The vaporizer of claim 5 wherein the thermally conductive block is fabricated of aluminum or an aluminum alloy.

12. **(Previously presented)** The vaporizer of claim 1 wherein the valved outlet passage comprises a conduit secured to a central portion of said sealing lid, as a single piece structure.

13. **(Currently amended)** The vaporizer of claim 1, holding least one of boron, gallium, indium, antimony, phosphorus, arsenic, lithium, sodium and a source material containing [[at]] fluorine.

14. **(Previously presented)** The vaporizer of claim 1 wherein the sealing lid is secured to the thermally conductive block by mechanical fasteners, and the heating device includes resistors attached to the thermally conductive block, a thermocouple attached to the

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thermally conductive block, and a temperature controller and power supply operatively arranged so that the temperature controller is actuated in response to temperature sensed by the thermocouple, to energize the resistors for heating of the thermally conductive block.

15.-24. (Cancelled)

25. **(Previously presented)** A vaporizing and deposition system comprising

a vaporizer comprising: a thermally conductive block having a multiplicity of stationary elongated wells formed therein for placement of a vapor source material, the multiplicity of elongated wells communicatively connected to an interior space within the thermally conductive block for accumulation of vapor, and wherein each elongated well consists of a closed end and a single opening in fluid communication with the interior space, the thermally conductive block having an interior volume that comprises (i) said interior space and (ii) an internal volume of said multiplicity of elongated wells, wherein the interior volume is in a range of from about 120 cm^3 to about 200 cm^3, wherein each of the elongated wells in said multiplicity of elongated wells has an internal diameter of from about 3 to about 8 mm, and wherein the internal volume of said multiplicity of said wells is from about 1/3 to about 1/2 of the interior volume;

a heating device for applying heat to the thermally conductive block to vaporize the source material;

a removable sealing lid positioned on and dimensionally coextensive with the top of the thermally conductive block, being in leak-tight contact along its entire peripheral extent with edges of the thermally conductive block for leak-tightly sealing the thermally conductive block to form a closed vessel, and removable for ease of filling the elongated wells, said lid having a single central outlet port therein as the only opening therein for flow out of the closed vessel of vapor deriving from said vapor source material; and

an actuatable outlet positioned in the single outlet port of the removable sealing lid for opening and allowing discharge of vapor formed in the vaporizer in fluid communication with the interior space, said outlet comprising a single vertical central valved outlet passage communicatively connected to the single central outlet port of the

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removable sealing lid and in vapor flow communication with the interior space, constituting the only outlet passage for discharge of vapor formed in the vaporizer

wherein said thermally conductive block is not coupled to a surrounding enclosing container.

26. **(Original)** The system of claim 25 wherein the source material directly contacts interior surfaces of elongated wells.

27. **(Previously presented)** The vaporizer of claim 1, wherein the thermally conductive block is fabricated of a suitable heat-conducting material.

28. **(Previously presented)** The vaporizer of claim 27, wherein the heat conducting material is selected from the group consisting of silver, silver alloys, copper, copper alloys, aluminum, aluminum alloys, lead, nickel clad, stainless steel, graphite and ceramic material.

29. **(New)** A vaporizer comprising:

a thermally conductive block comprising a top surface and bottom surface and a multiplicity of non-moving elongated wells formed therein for placement of a vapor source material, the multiplicity of elongated wells communicatively connected to an interior space within the thermally conductive block for accumulation of vapor, wherein each elongated well consists of a closed end and single opening that is in fluid communication with the interior space, and wherein each elongated well is vertically positioned relative to the top and bottom surface of the conductive block;

a heating device for applying heat to the multiplicity of the elongated wells within the thermally conductive block;

a removable sealing lid positioned on the top of the thermally conductive block for sealing the thermally conductive block to form a closed vessel and removable for ease of filling the elongated wells; and

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an openable and closable outlet for discharge of vapor formed in the vaporizer communicatively connected to the removable sealing lid and the interior space, wherein the vaporizer contains a solid source material selected from the group consisting of boron source materials, gallium source materials, indium source materials, antimony source materials, phosphorus source materials, arsenic source materials, lithium source materials, and fluorine source materials.

30. (New) The vaporizer of claim 29, wherein the vaporizer contains a boron source material.

31. (New) The vaporizer of claim 29, wherein the vaporizer contains a gallium source material.

32. (New) The vaporizer of claim 29, wherein the vaporizer contains an indium source material.

33. (New) The vaporizer of claim 29, wherein the vaporizer contains an antimony source material.

34. (New) The vaporizer of claim 29, wherein the vaporizer contains a phosphorus source material.

35. (New) The vaporizer of claim 29, wherein the vaporizer contains an arsenic source material.

36. (New) The vaporizer of claim 29, wherein the vaporizer contains a lithium source material.

37. (New) The vaporizer of claim 29, wherein the vaporizer contains a fluorine source material.

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38. (New) The vaporizer of claim 29, wherein the boron source material is decaborane, wherein the gallium source material is gallium, wherein the indium source material is indium, wherein the antimony source material is antimony, wherein the phosphorus source material is phosphorus, wherein the arsenic source material is arsenic, wherein the lithium source material is lithium, and wherein the fluorine source material is sodium tetrafluoroborate.

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